

1 **WHAT IS CLAIMED IS:**

2 1. A door lock comprising:

3 a cylinder (10) installed in a lock hole (61) of a door (60) and located at
4 an exterior surface of the door (60), the cylinder (10) having a core (11) rotatably
5 received therein, a flat finger (12) connected with the core (11), and a plurality of
6 threaded holes (13) defined in the cylinder (10) around the core (11);

7 a latch (20) movably provided in a latch hole (62) of the door (60) and
8 the flat finger (12) extending through the latch (20);

9 an inner cover (30) provided at an interior surface of the door (60)
10 opposite to the cylinder (10), the inner cover (30) having a plurality of sink holes
11 (31) defined therethrough and corresponding to the threaded holes (13), a
12 plurality of first screws (33) extending through the sink holes (31) and engaged
13 in the threaded holes (13), and a first central opening (32) defined therethrough;

14 an outer cover (40) provided outside the inner cover (30) and concealing
15 the inner cover (30), the outer cover (40) having a second central opening (41)
16 defined therethrough and aligned with the first central opening (32);

17 a knob (50) provided outside the outer cover (40), the knob (50) having a
18 resilient member (52) against the outer cover (40) provided at an end facing the
19 outer cover (40), and a hollow shaft (53) extending through the first opening (32)
20 and the second opening (41) and having a front end (532) connected with the
21 finger (12) and a rear end (531) engaged with the knob (50);

22 whereby, when the knob (50) is turned, the latch (20) can be extended or
23 retracted to lock/unlock the door (60).

24 2. The door lock as claimed in claim 1 further comprising a guard plate

1 (70) provided inside the inner cover (30) and having a flange (71) received in the
2 lock hole (61), an edge (72) abutting a rim (35) of the inner cover (30), a plurality
3 of first holes (73) corresponding to the sink holes (31) of the inner cover (30)
4 defined through the guard plate (70) and the first screws (33) respectively
5 extending through the first holes (73), a third central hole (74) defined through
6 guard plate (70) and aligned with the first central hole (32) for the shaft (53)
7 extending therethrough.

8 3. The door lock as claimed in claim 1 further comprising a guard plug
9 (80) provided inside the inner cover (30), and having a first step (81) and a
10 second step (82), wherein a diameter of the first step (81) is smaller than a
11 diameter of the second step (82), and the first step (81) and second step (82) are
12 selectively received in the lock hole (61) and the inner cover (30), a shoulder (83)
13 formed between the first step (81) and the second step (82) and abutting the rim
14 (35) of the inner cover (30), a plurality of second holes (85) respectively aligned
15 with the sink holes (31) for the first screws (33) extending through the second
16 holes (85), and a fourth central hole (84) defined through the guard plug (80) for
17 the shaft (53) extending therethrough.

18 4. The door lock as claimed in claim 1, wherein the knob (50) has a
19 ringed recess (51) defined at the end facing the outer cover (40) and the resilient
20 member (52) is received in the recess (51).

21 5. The door lock as claimed in claim 1, wherein the inner cover (30) has
22 at least two lugs (34) respectively engaged in at least two apertures (42) of the
23 outer cover (40) to fasten the outer cover (40).

24 6. The door lock as claimed in claim 5, wherein the lugs (34) are formed

1 around the first central opening (32), and the apertures (42) are defined around
2 the second central opening (41).

3 7. The door lock as claimed in claim 1, wherein the knob (50) further has
4 a shaft hole (55) longitudinally defined therein, and the rear end of the shaft (53)
5 is matingly positioned in the shaft hole (55).

6 8. The door lock as claimed in claim 7, wherein the cross sections of the
7 shaft hole (55) and the rear end (531) of the shaft (53) are polygonal.

8 9. The door lock as claimed in claim 7, wherein the knob (50) further has
9 a threaded aperture (56) radially defined through the shaft hole (55), and a
10 second screw (57) engaged in the threaded aperture (56) to fasten the shaft (53)
11 in the shaft hole (55).

12 10. The door lock as claimed in claim 1 further comprising a sleeve (58)
13 provided outside the front end (532) of the shaft (53) and having an opening (581)
14 for the finger (12) extending therethrough.